

Rural Access Infrastructure Funding & Inventory Process

PROCESS IMPLEMENTATION GUIDANCE FOR SDCL § 31-34 JUNE 23, 2022

PREPARED BY DAVE HUFT, SDDOT

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SD2021-03 Working Group Members

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Legislation & Funding

Small Structure Inventory

Small Structure Improvement Plans

Project Funding Applications

Calendar and Next Steps

Presentation Topics

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Legislation & Funding

HB1259 (2021), HB1070 (2022)

- ■In SDCL § 31-34
- \$3M in FY2022 for inventory
- ■\$3M in FY2023
 - Construction
 - Rehabilitation
 - Replacement
 - Engineering
 - Planning
- Requirements and Process

HB1306 (2022)

- \$25M appropriated
- 3 equal annual amounts (\$8.33M)
- FY2023, FY2024, FY2025
- Distribution by same method as \$3M FY2023 distribution

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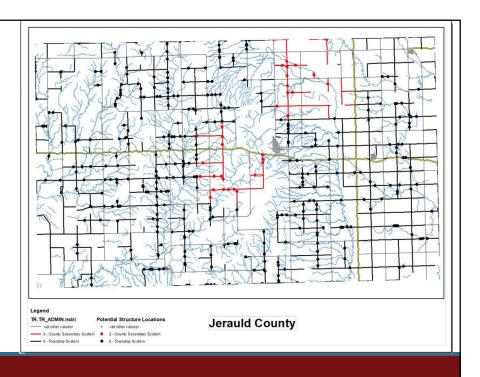
First Funding Distribution to Counties

SDCL § 31-34-2 and § 31-34-3

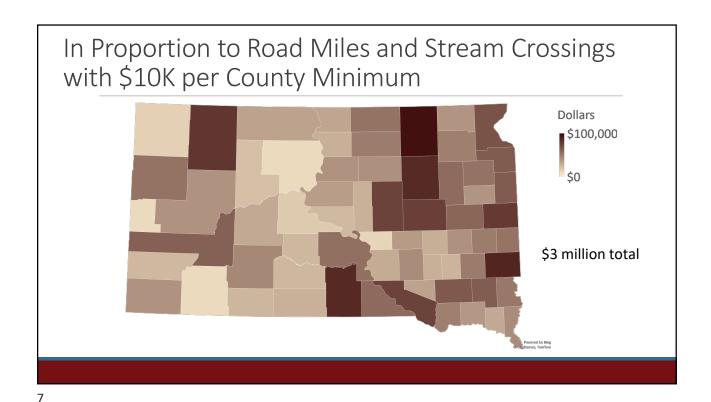
- Each county must establish a rural access infrastructure fund (295) for the deposit of funds
- "By August 1, 2021, DOR shall distribute the sum of \$3 million on a pro rata basis to each county for the purpose of planning and completing an inventory of small structures."
- Pro rata based on:
 - miles of county secondary and township road
 - estimated number of stream crossings
 - a baseline amount to establish an inventory
- Distribution of funds was made by SDDOR mid-July 2021

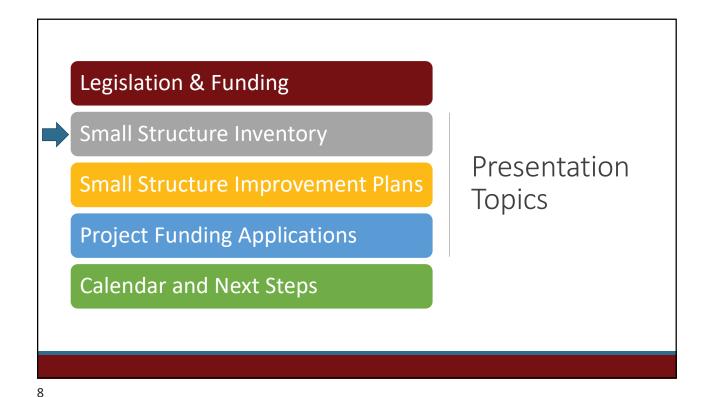
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County
Secondary
& Township
Roads and
Stream
Crossings



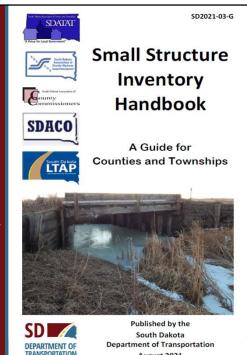
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Small Structure Inventory Handbook

- 8½" x 5½" spiral bound
- Item-by-item description
- Lists all allowable responses
- Graphics and photographs to guide selection
- Posted on SDACC and SDATAT websites August 4
- Hard copies to county auditors September 3
- More hard copies are available



August 2021

Small Structure Inventory Common Elements

LOCATION

- Structure ID #
- County Name
- Township Name
- Structure Owner
- Latitude
- Longitude
- Location (roadway or approach)

ROAD

- Highway Number
- Roadway Maintenance Level
- Number of Residences Served
- Detour Length (if culvert fails)
- Surface Type
- Surface Condition

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May 5, 2022 5

Culvert Inventory Elements

ATTRIBUTES

- Year Constructed
- Culvert Purpose
- Culvert Type
- Culvert Shape
- Material Type
- Lining
- End Types

DIMENSIONS

- Number of Cells
- Span
- Rise
- Length
- Skew Angle
- Length in Direction of Roadway
- Cover Height

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Culvert Inventory Elements

CONDITION

- Crushing
- Infiltration
- Joint Separation
- Material Deterioration
- Plugging
- Load Posting
- Culvert Damage
- Overall Condition
- Inslope Cavities

DRAINAGE

- End Type
- Erosion Control
- Inlet Erosion
- Outlet Erosion
- Water Level
- Perching
- Overtopping Frequency

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Small Bridge Inventory Elements

ATTRIBUTES

- Structure Status (open, posted, closed)
- Bridge Railing (yes/no)
- Approach Guardrail (yes/no)
- Design Type
- Material Type
- Condition

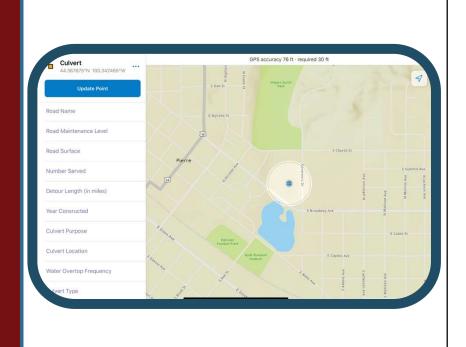
DIMENSIONS

- Structure Length
- Number of Spans
- Number of Lanes
- Deck Width
- Roadway Width
- Skew Angle

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Small Structure Inventory Mobile App

- ESRI Collector app
- Tracks Inventory Handbook exactly
- Culvert and Small Bridge Protocols
- Embeds photograph images
- Feeds directly into Statewide Small Structure Database



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Small Structure Inventory Spreadsheet

- Tracks Inventory Handbook exactly
- Culvert and Small Bridge Protocols
- Embeds photograph images
- Can be imported into Statewide Small Structure Database

	Start Over			Submit Form
	Instructions: Enter a response in each hig	phlighted field.		
		LOCATION		
tem 1	County Name*			
tem 2	Township*		-	
tem 3	Owner*		-	
tem 4	Temporary Small Structure Identifier*			
tem 5	Culvert Sequence Number*			
tem 6	Permanent Identifier			
tem 7	Inventoried By*			
tem 8	Inventory Date (mm/dd/yyyy)*			
tem 9	Latitude*			
em 10	Longitude*			

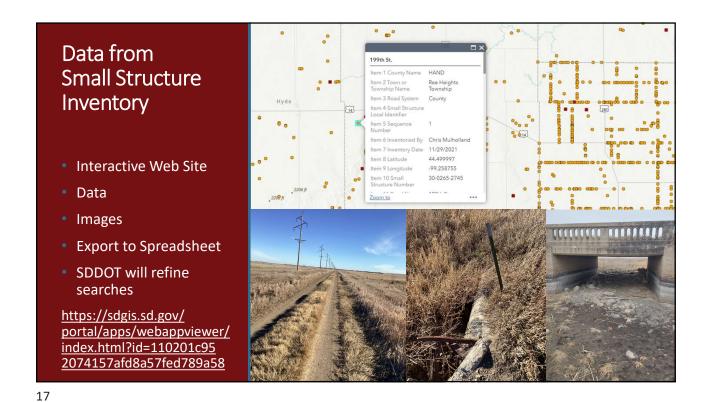
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Small Structure Inventory Paper Forms

- Tracks Inventory Handbook exactly
- Culvert and Small Bridge Protocols
- Identifies image filenames
- Information must be entered into the Spreadsheet tool for submission to the Statewide Small Structure Database

	ON INVENTORY ITEMS				Water Overtop	☐ Unknown ☐ Multiple times per year	☐ Every five years				
Locatio	County Name			Item 19	Frequency	☐ Yearly					
		Oz Emerald City			requericy	Every two years	Rarely or never				
Item 2	Town or Township Name					☐ Box Culvert	☐ Arch				
Item 3	Owner	☐ County ☐ Town or Township ☐ Other			Culvert Type		Other				
Item 4	Temporary Small Structure Identifier	Toto Crossing		Item 21	Number of Cells	3_cells □ Precast concrete □ PP					
Item 5	Sequence Number	1				☐ Cast-in-place concrete					
Item 6	Inventoried By	Tin Mann		Hom 22	Material	☑ Galvanized steel	□Wood				
Item 7	Inventory Date	_07_/_19_/20_21	HeIII 22	Malerial	☐ Aluminum steel	☐ Masonry					
Item 8	Latitude	44.123456	degrees			☐ Steel	☐ Other				
Item 9	Longitude	-100.123456	degrees			□ HDPE					
Item 10	Small Structure Number		(to be assigned later)	Item 23	Lining	☐ Lining Present					
Road A	Attributes			Cultural	Dimensions	No Lining					
Item 11	Road Name	Yellow Brick Road		Cuiven	Dimensions	⊠ Round	Rectangle				
Item 12	Road Maintenance Level	■ Full Maintenance ☐ Minimum Maintenance	☐ No Maintenance	Item 24	Shape	☐ Pipe Arch	☐ Cattle Pass ☐ Open Bottom				
Item 13		□ Dirt	Asphalt Mat Concrete			□ Elliptical	Other				
		☐ Gravel ☐ Blotter	☐ Other	Item 25	Span	48 inches					
_		Not a Dead End	Li Other	Item 26	Rise	48 inches					
Item 14		No homes, farms, rand		Item 27	Barrel Length	40 feet					
	Number Served	1 home, farm, or ranch	162		Length Along Roadway	lway 19 feet					
		☐ More than 1 home, farm	o or ranch		Skew Angle	10 degrees					
Item 15	Detour Length	6 miles	i, or ranor		Cover Height	4 feet					
	RT INVENTORY ITEMS	Times		Culver	Condition						
	t Attributes			W 04	Crushina	□None	☐ Moderate				
Item 16	Year Constructed	1975		item 31	Crusning	⊠ Mild	☐ Severe				
		☑ Drainage ☐ Livestock Passage		Item 32	Joint Separation	□ None □ Mild	Moderate Severe				
Item 17	Culvert Purpose	☐ Drainage & Livestock P ☐ Pedestrian or Bicycle T	assage rail	Item 33	Infiltration	□ None ⋈ Mild	☐ Moderate ☐ Severe				
	econe page or	☐ Other ☐ Culvert lies under main		Item 34	Material Deterioration	□ None □ Mild					
Item 18	Culvert Location	☐ Culvert lies under appro ☐ Other	oach	Item 35	Damage	□ None ⊠ Mild	☐ Moderate ☐ Severe				
				Item 36	Plugging	□ None □ Mild	☐ Moderate ☑ Severe				

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Inventory Progress 05/31/2022

14,279 culverts

558 bridges

65 counties

May 5, 2022 9

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Small Structure Inventory

Small Structure Improvement Plans

Project Funding Applications

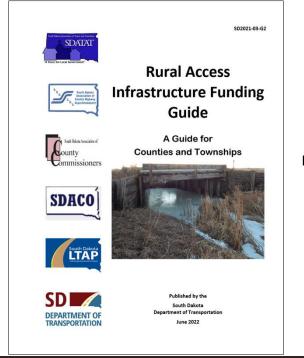
Calendar and Next Steps

Presentation Topics

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Small Structure Improvement Plan Guide

- Legislation & Process
- Agency, Roadway, Structure Eligibility
- Inventory Collection & Maintenance
- Small Structure
 Improvement Plan Guidance
 & Template
- Funding Application Guidance & Template
- Small Structure Replacement and Rehabilitation Options



Publish online June 2022

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Improvement Eligibility

Eligible Agencies

- Townships with either:
 - 50¢ per thousand annual property tax
- Tax levy opt-out
- Counties

Eligible Roads

- Township
- County Secondary
- Full Maintenance Only

Eligible Structures

- ≥16 ft² opening
- "Not a bridge as defined in SDCL § 31-14-1"

Eligible Activities

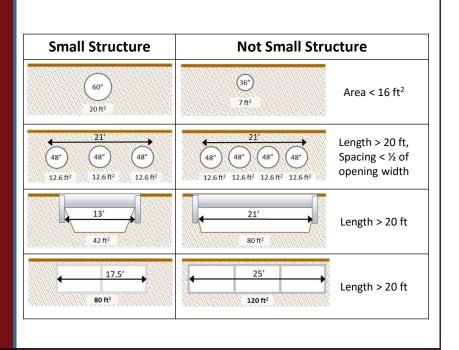
- Engineering, hydrological studies, planning, materials, and other costs necessary to plan for and complete the projects
- Construction, rehabilitation, or replacement of small structures

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What is a Small Structure?

SDCL § 31-34-1 defines a small structure as "any small bridge or culvert with an opening of sixteen square feet or more located on a township road or county secondary road, excluding bridges as defined in § 31-14-1".

SDCL § 31-14-1 defines a bridge as "a structure, including supports, erected over a depression or an obstruction, as water, highway, or railway, the structure having a length measured along the center of the roadway of more than twenty feet between undercopings of abutments or extreme ends of openings for multiple boxes and pipes where the clear distance between openings is less than half of the smaller contiguous opening".



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Small Structure Improvement Plan Required Content

- Agency Resolution
- Map(s) of all small structures in jurisdiction
- Data for all structures
 - Location
 - Width
 - Length
 - Condition
 - Load Posting

- ■5-year Improvement Project List
 - Location
 - Type
 - Funding Source(s)
 - Estimated Cost
 - Year of Completion
- Financial Report (townships only)
- Other items prescribed by SDDOT (none identified so far)

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Small Structure Improvement Plan Content

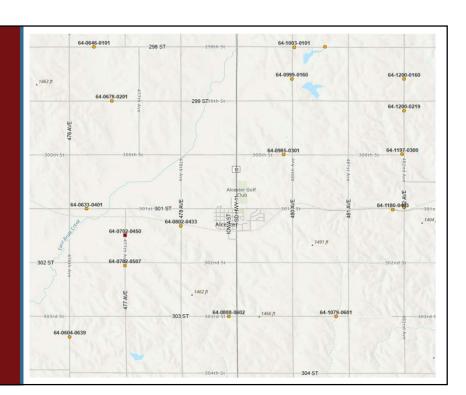
Agency Resolution adopting the plan

Resolution Adopting a	Small Structure Improvement Plan	
TheStructure Improvement Plan and acknowledge	Township Board hereby approves the attached 5-Year Small static complies with South Dakota Codified Law § 31-34-7.	
Approved this day of	,202	
By:Township Board Chairperson	-	
Attest:		
Township Clerk	_	
Township Contact Person:Phone Number: Email Address:		
Received byC	ounty on	

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Small Structure Improvement Plan Content

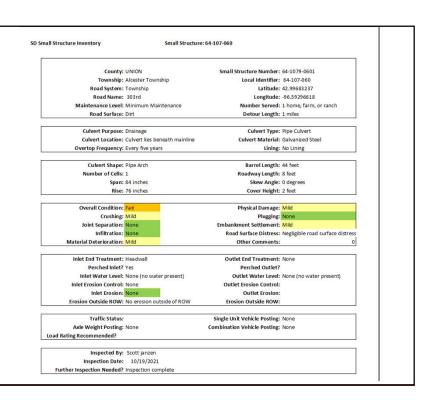
- Map(s) of all small structures in the jurisdiction
 - Create from GIS database, or
 - Custom maps by agency



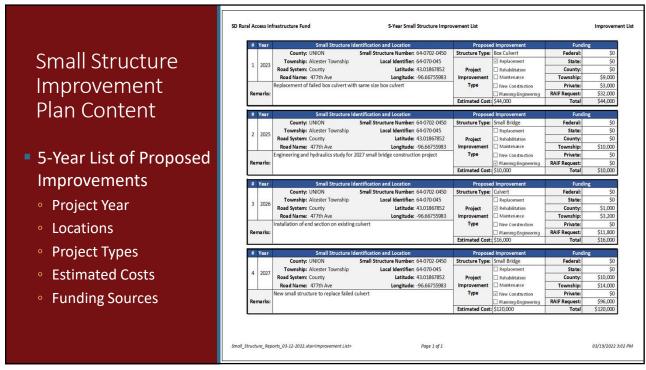
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Small Structure Improvement Plan Content

- Data for all structures
 - Small Structure Report from inventory data
 - One structure/page
 - Required items
 - Other inventory information
 - Custom reports by agency



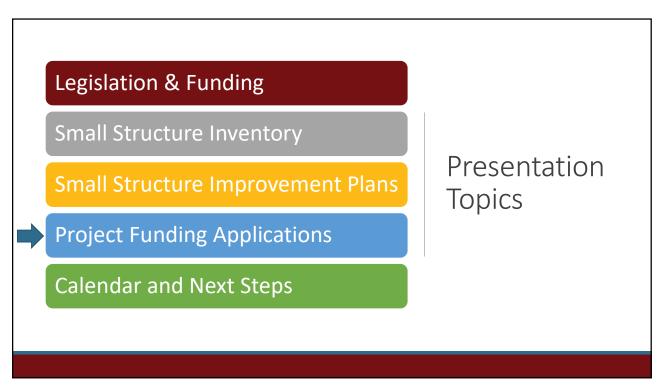
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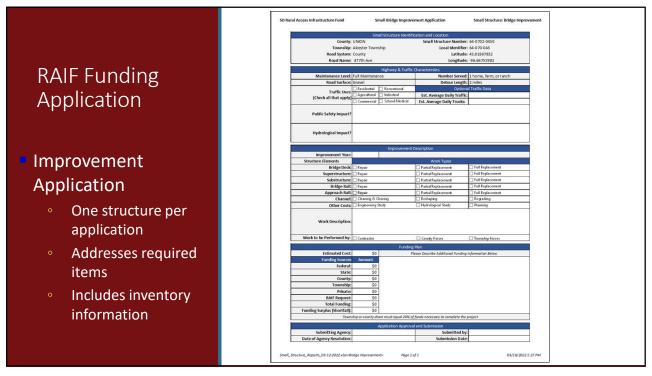
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Small Structure Improvement Improvement Plan Content Improvement Plan Content Improvement Improvement

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County Commissions Must Consider

- Traffic use of the highway
- Public safety
- Residential, commercial, recreational, and other uses of the highway
- Cost of the project
- Length of detour if the project is not completed
- Number of residences, farms, and ranches served by the project
- Financial contribution from township or others to the project

- Ability of township to fund the project without the rural access infrastructure fund
- Confirmation the project is not located on a no maintenance or minimum maintenance road
- Hydrological impact
- Whether the highway terminates into a field entrance, driveway, single residence, farm, or ranch
- The application or group of applications that best serves the citizens of South Dakota

Counties and townships will have to establish funding agreements & procedures

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Legislation & Funding

Small Structure Inventory

Small Structure Improvement Plans

Project Funding Applications

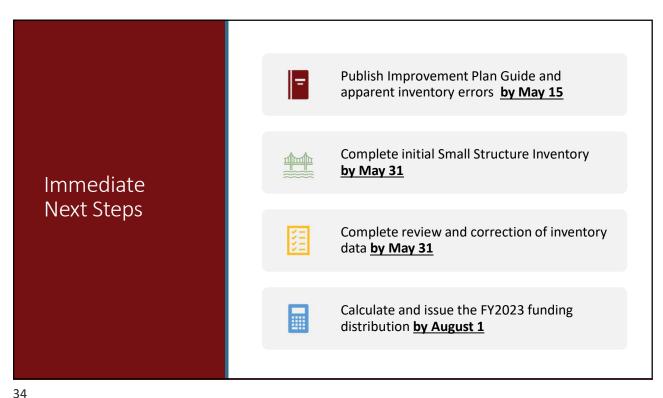
Calendar and Next Steps

Presentation Topics

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2021											20	22						2023 ⇔											
Task or Milestone	J	J		S		N	D	J	F	М	Α	М			Α	S	0	N	D	J	F	M		M			Α	S	C
										Fund	ling D	istrib	utio	n															
Calculate funding distribution																													
Distribute RAIF to counties (\$M)		3	Aug 1	3										11.3	Aug 1											8.3	Aug 1		
									Sn	nall S	tructu	ıre In	ven	tory															
Establish inventory database																													
Publish inventory handbook and tools																							14						
Inventory small structures												May 31												May 31					-
- 1/2								Sm	all S	tructi	ıre In	nprov	/em	ent P	lans														
Publish guidance for improvement plans																													
Develop small structure improvement plans															Aug 31												Aug 31		
								Fu	ındir	ng Ap	plicat	tions	and	Awa	rds														
Develop grant applications																	Oct 31												
Award grants																				Jan 15									
Make structure improvements																													
Make structure improvements																													

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Questions? Contact: Dave Huft SDDOT Intelligent Transportation Systems Program Manager dave.huft@state.sd.us 605.773.3358

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